Science Focus: Space	Year Group: 1	Spring Term 1

Key Knowledge:

Overview

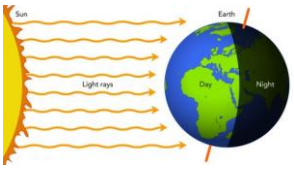
The solar system	• A *solar system* is a *star* that has objects (such as *planets*) *orbiting* around it. • Our *solar system* has 1 star, the *sun* with 8 *planets orbiting* around it.

The Earth

The Earth and the Sun.	• The *Sun* is the *star* at the centre of our *solar system*. • The *Sun* gives the *Earth* it's light, heat and influences the seasons. • The *Earth orbits* the *Sun*. • It takes the Earth 1 year to *orbit* the *Sun*.

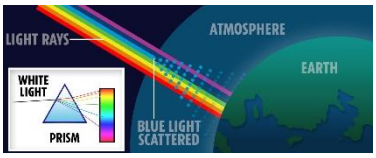
What causes day and night?

- As well as *orbiting* the *Sun*, the *Earth* also spins on its own *axis*.
- The *Earth* takes 24 hours (1 day) to completely *rotate* on its *axis*.
- The side of the *Earth* facing the *Sun* is in daytime.
- The side of the *Earth* facing away from the *Sun* is in night time.
- Because the *Earth* is turning, the *Sun* appears to move across the sky, but the *Sun* does not move it is us that is moving.



Why is the sky blue?

- Our *Sun* gives out white light, within the white light there are the 7 colours of the rainbow (red, orange, yellow, green, blue, indigo and violet).
- The colours within the light travel in waves, red light has the longest wavelength and violet has the smallest wavelength.
- When the white light reaches the *Earth's atmosphere*, the blue wave hits dust, dirt and pollen particles within the *atmosphere*.
- This causes the blue light to *refract*, scatter and spread out within the *atmosphere* making the sky blue.



The Planets

- A *planet* is an object that orbits a *star*, that does not give out its own light.
- *Planets* can be made mostly of rock or mostly of gases.
- Our *solar system* has 8 planets and 1 dwarf planet.
- The *planets* are: Mercury, Venus, *Earth*, Mars, Jupiter, Saturn, Uranus and Neptune.
- The dwarf *planet* is called Pluto.
- Mercury, Venus, *Earth* and Mars are rocky planets.
- Jupiter, Saturn, Uranus and Neptune are gas planets.

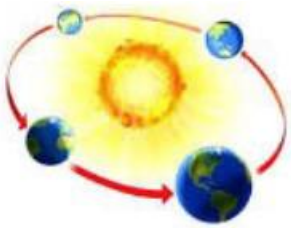
Possible Experiments:

- Create a model of the solar system.
- Make a shadow clock or sundial to see how the Earth moves during the day.
- Keep a diary of the moon and notice how it changes during the month.

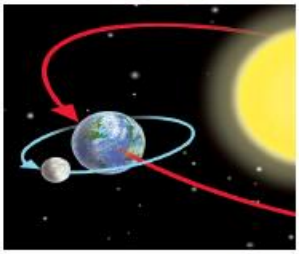
Key Vocabulary:

Solar system	a *solar system* is a *star* that has objects (such as *planets*) *orbiting* around it.
Sun	a huge *star* that the Earth and the other *planets* in our *solar system orbit* around.
star	a giant ball of hot gas and plasma.
Earth	the planet on which we live. Also called the world.
orbit	to repeatedly move around something in a curved path.
planet	a large object, round or nearly round that *orbits* a *star*.
moon	a natural *satellite* which *orbits* Earth and other *planets*.
satellite	any object or body is space that *orbits* something else, for example the *moon* is a *satellite* of the Earth.
rotate	To spin around.
axis	An imaginary line that something *rotates* around. The Earth's *axis* runs from the North pole to the South pole.
atmosphere	the layer of gases that surround a *planet*.
refract	when a ray of light changes direction.

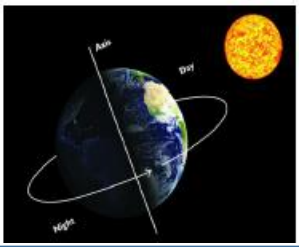
Diagrams and Symbols:



The Earth orbiting the Sun, which takes one year.



The Moon orbiting the Earth, which takes about 28 days.



The Earth spinning on its axis, which takes 24 hours.